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### INSPEC - 1969 to date (INZZ)

#### Accession number & update

4912206, A9508-0130C-027; 950329.

#### Title

Proceedings of the 1994 International Conference and Exhibition on Powder Metallurgy and Particulate Materials. Metal and **Ceramic** Injection Molding.

#### Source

Proceedings of the 1994 International Conference and Exhibition on Powder Metallurgy and Particulate Materials. Metal and **Ceramic** Injection Molding, Toronto, Ont., Canada, 8-11 May 1994.

Sponsors: Metal Powder Ind. Federation, APMI Int.

Published: Metal Powder Ind. Federation, Princeton, NJ, USA, xx+294 pp, 1994.

#### Publication year

1994.

#### Language

EN.

#### Publication type

CPR Conference Proceedings.

#### Abstract

This volume is devoted to the rapidly expanding world of metal and **ceramic** injection molding; a technology recently introduced into production, yet continuing to attract considerable interest and enthusiasm because of the potential for developing exciting new alloys and shapes. This technology is also referred to as powder injection molding. Included in this volume are 23 papers covering important aspects of the process, including powder selection, binder formulation, mix rheology, molding and **sintering**. Three papers cover binder considerations and one discusses the mixing of feedstock. Additional papers discuss computer simulation, runnerless systems, mold temperature control, modeling of debinding kinetics, catalytic debinding and application of ultrasonic sensors. The **sintering** step, as applied to metal and **ceramic** injection molding, is closely reviewed in four separate papers. The remaining papers cover newly developed materials and applications using the metal and **ceramic** injection molding technology. This includes controlled expansion alloys, superalloys, precious metal components, improved corrosion resistant stainless steels, advanced electronic packages, **magnetic** alloys, composites and **tungsten** heavy alloy penetrators.

#### Descriptors

alloys; ceramics; manufacturing-processes; powder-metallurgy; powder-technology; rheology; sintering.

#### Keywords

metal injection molding; feedstock mixing; **ceramic** injection molding; alloys; shapes; powder injection molding; powder selection; binder formulation; mix rheology; molding; **sintering**; binder

considerations; computer simulation; runnerless systems; mold temperature control; modeling; debinding kinetics; catalytic debinding; ultrasonic sensors; newly developed materials; controlled expansion alloys; superalloys; precious metal components; corrosion resistant stainless steels; advanced electronic packages; **magnetic** alloys; composites; **tungsten** heavy alloy penetrators; FeCCrNi.

**Classification**

A0130C (Conference proceedings).  
A8120E (Powder techniques, compaction and **sintering**).  
A8120L (Preparation of ceramics and refractories).  
A8120G (Preparation of specific metals and alloys (compacts, pseudoalloys)).

**Chemical indexing**

FeCCrNi ss, Cr ss, Fe ss, Ni ss, C ss.

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